APPENDIX G.
Access to Capital for Business Formation and Success

Access to capital is one of the factors researchers have examined when studying business formation and success. If discrimination exists in capital markets, minorities and women may have difficulty acquiring the capital necessary to start, operate or expand businesses.[1] This appendix explores access to business capital, which relates closely to matters discussed in Appendix E and Appendix F.

BBC first examines homeownership and mortgage lending, as home equity can be an important source of capital to start and expand businesses. The appendix then turns to business loans, assessing whether minorities and females experience difficulty acquiring capital.

Homeownership and Mortgage Lending

BBC analyzed homeownership and the mortgage lending industry to explore differences across race/ethnicity and gender that may lead to disparities in access to capital.

Homeownership. Wealth created through homeownership can be an important source of capital to start or expand a business.[2] Any barriers to homeownership and home equity growth for minorities or women can affect business opportunities by constraining their available funding. Similarly, any barriers to accessing home equity through home mortgages can also affect available capital for new or expanding businesses. In sum:

- A home is a tangible asset that provides borrowing power;[3]
- Wealth that accrues from housing equity and tax savings from homeownership contributes to capital formation;[4]
- Next to business lines of credit, mortgage loans have traditionally been the second largest loan type for small businesses;[5] and
- Homeownership is associated with an estimated 30 percent reduction in probability of loan denial for small businesses.[6]

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[1] For example, see: Coleman, Susan. 2002. Small Firm Sources of Debt Capital: A Comparison by Gender, Race and Ethnicity. University of Hartford.

[2] The recent (beginning in late 2006) housing and mortgage crisis has substantially impacted the ability of small businesses to secure loans through home equity. A discussion of the consequences to small businesses and MBE/WBEs is provided at the end of this section.

[3] Nevin, Allen. 2006. "Homeownership in California: A CBIA Economic Treatise." *California Building Industry Association.* 2.

[4] Jackman, Mary R. and Robert W. Jackman 1980. "Racial Inequalities in Home Ownership." *Social Forces.* 58. 1221-1234.

[5] Berger, Allen N. and Gregory F. Udell. 1998. "The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle." *Journal of Banking and Finance.* 22.

The study team first analyzed homeownership rates and home values in Georgia before considering loan denial and subprime lending.

Homeownership rates. Many studies document past discrimination in the U.S. housing market. The United States has a history of restrictive real estate covenants and property laws that affect the ownership rights of minorities and women.[7] In the past, for example, a woman's participation in homeownership was secondary to that of her husband and parents.[8]

BBC used 2000 U.S. Census of Population (Census) and 2007-2009 American Community Survey (ACS) data to examine homeownership rates in Georgia and the United States. Figure G-1 presents rates of homeownership for minority groups and non-Hispanic whites.

Approximately three quarters of non-Hispanic white households owned homes in Georgia in 2000. Homeownership rates were lower for each minority group than for non-Hispanic white households in Georgia.

- Approximately 51 percent of African American households were homeowners in 2000 (a difference from the rate for non-Hispanic white households that is statistically significant at the 99% level);
- About 38 percent of Hispanic American households in Georgia were homeowners in 2000 (statistically significant at the 99% level);
- The homeownership rates in 2000 for Subcontinent Asian Americans and Asian-Pacific Americans were 48 percent and 58 percent, respectively; and
- Native Americans in Georgia owned homes at a rate of 65 percent.

Disparities in homeownership rates are also apparent in the 2007-2009 data.

[6] Cavalluzzo, Ken and John Wolken. 2005. "Small Business Loan Turndowns, Personal Wealth and Discrimination." *Journal of Business.* 78:2153-2178.

[7] Ladd, Helen F. 1982. "Equal Credit Opportunity: Women and Mortgage Credit." *The American Economic Review*. 72:166-170.

[8] Card, Emily. 1980. "Women, Housing Access, and Mortgage Credit." *Signs.* 5:215-219.

Figure G-1. Homeownership rates, 2000, 2007-2009

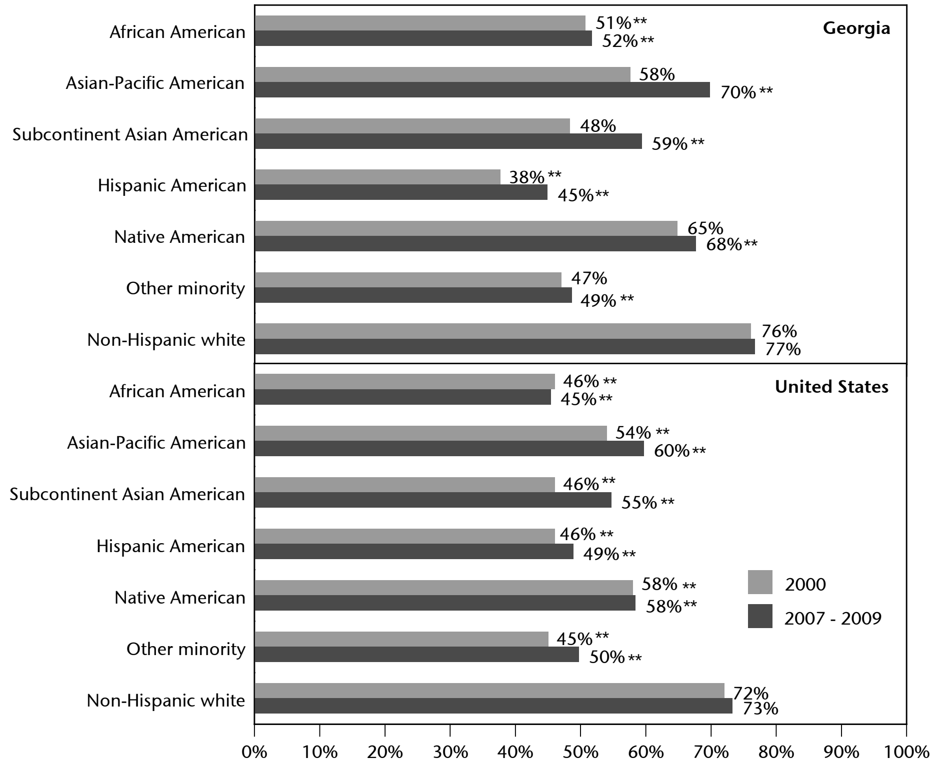
Note:

The sample universe is all households.

** Denotes that the difference in proportions from non-Hispanic white for the given year is statistically significant at the 95% confidence level.

Source:

BBC Research & Consulting from 2000 U.S. Census and 2007-2009 ACS data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.



Although not presented here, the study team also examined homeownership rates for heads of household working in the construction and engineering industries. In Georgia, each minority group in the engineering industry and each minority group except Asian Americans in the construction industry had lower rates of home ownership than non-Hispanic whites. In the U.S. as a whole, each minority group in both industries had a lower rate of home ownership than non-Hispanic whites.

Lower rates of homeownership may, to an extent, reflect lower incomes for minorities. This relationship may be self-reinforcing, as low wealth puts individuals at a disadvantage in becoming homeowners, which has historically been an effective path to building wealth. An older study found statistically significant results indicating that the probability of homeownership is considerably lower for African Americans than it is for comparable non-Hispanic whites throughout the U.S.[9]

Home values. Research has found homeownership and home values to be direct determinants of capital available to form or expand businesses.[10] Using 2000 Census and 2007-2009 ACS data, BBC compared median home values by racial and ethnic groups. Figure G-2 presents results for 2000 in Georgia and the United States.

[9] Jackman. 1980. “Racial Inequalities in Home Ownership.”

[10] Fairlie, Robert W. and Harry A. Krashinky. 2006. “Liquidity Constraints, Household Wealth, and Entrepreneurship Revisited.” IZA Discussion Paper. No. 2201.

For 2000, the median home value of non-Hispanic white homeowners in Georgia was $110,300, substantially greater than the median value of homes owned by African Americans ($79,500), Hispanic Americans ($97,000) and Native Americans ($89,600). Asian Pacific Americans and Subcontinent Asian Americans, on average, owned homes of greater value than non-Hispanic whites.

The pattern of differences in median home value for minorities compared to non-Hispanic whites in Georgia was similar to the differences seen in the United States as a whole.

**Figure G-2.
Median home value, 2000**

Note:

The sample universe is all owner-occupied housing units.

Source:

BBC Research & Consulting from 2000 U.S. Census data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.

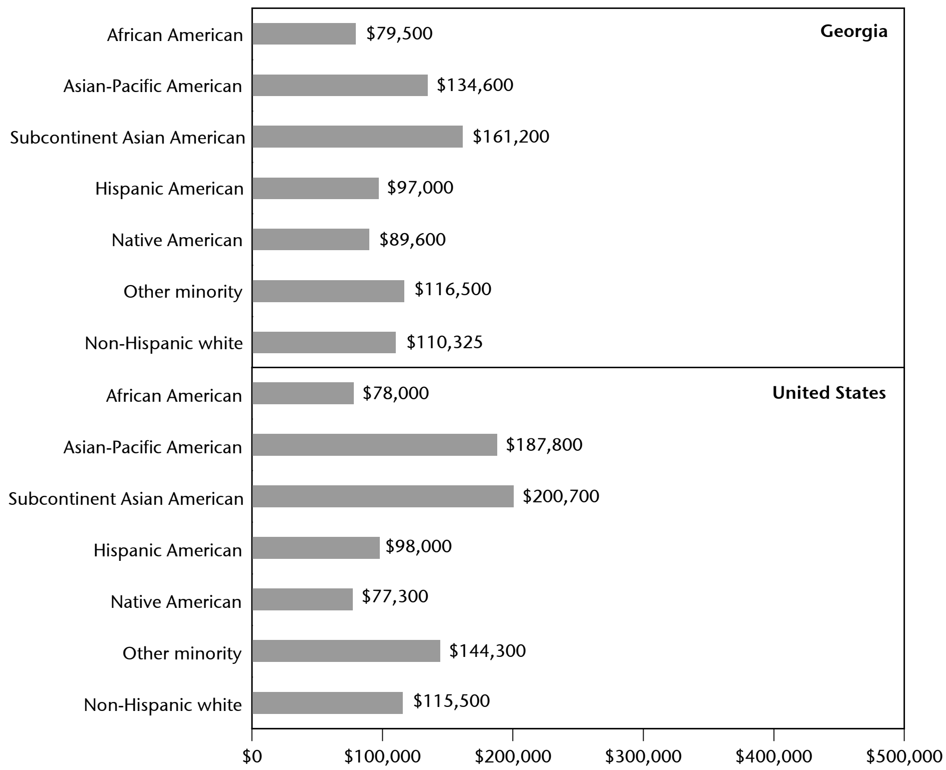


Figure G-3 presents median home values by race/ethnicity groups in Georgia and the U.S. based on 2007-2009 ACS data. Similar to the figures for 2000, African Americans, Hispanic Americans and Native Americans had substantially lower median home values than non-Hispanic whites in Georgia.

In the United States, median home values for African Americans and Native Americans remained well below values for non-Hispanic whites in 2007-2009. The national median value for Hispanic Americans began to close the gap, but was still slightly below the value for non-Hispanic whites.

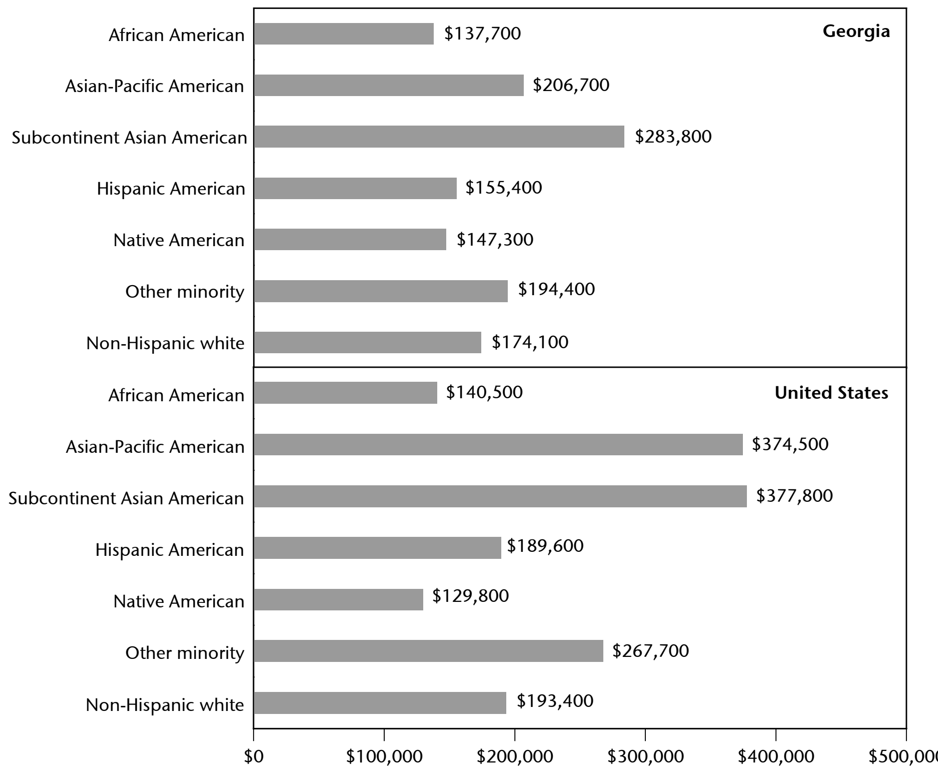
Figure G-3. Median home value, 2007-2009

Note:

The sample universe is all owner-occupied housing units.

Source:

BBC Research & Consulting from 2007-2009 American Community Survey data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.



Mortgage lending. Minorities may be denied opportunities to own homes, to purchase more expensive homes or to access equity in their homes if they are discriminated against when applying for home mortgages. For example, in a recent lawsuit, Bank of America paid $335 million to settle allegations that its Countrywide Financial unit discriminated against African American and Hispanic borrowers between 2004 and 2008. The case was brought by the Securities and Exchange Commission after finding evidence of "statistically significant disparities by race and ethnicity" among Countrywide Financial customers.[11]

[11] Savage, Charlie. December 22, 2011. "$335 Million Settlement on Countywide Lending Bias." NYTimes.com. Available online at http://www.nytimes.com/2011/12/22/business/us-settlement-reported-on-countrywide-lending.html.

BBC explored market conditions for mortgage lending in Georgia and the nation as a whole. The best available source of information concerning mortgage lending comes from Home Mortgage Disclosure Act (HMDA) data, which contain information on mortgage loan applications received by financial institutions, savings banks, credit unions and some mortgage companies.[12] These data include information about the location, dollar amount and types of loans made, as well as race and ethnicity, income and credit characteristics of all loan applicants. The data are available for home purchases, loan refinances and home improvement loans.

BBC examined HMDA statistics provided by the Federal Financial Institutions Examination Council (FFIEC) on conventional loan denial rates for high-income borrowers. Conventional loans are loans not insured by a government program; high-income borrowers are those households with 120 percent or more of the U.S. Department of Housing and Urban Development (HUD) area median family income.[13] Loan denial rates are calculated as a share of mortgage loan applications, excluding applications terminated by the potential borrowers.

Figure G-4 reports denial rates for 2006 and 2009. Although the 2009 HMDA data reflect a more recent lending climate, the 2006 data represent a more complete data set from before the recent mortgage crisis. For example, many of the institutions that originated loans in 2006 were no longer in business by the 2009 reporting date for HMDA data.[14] Additionally, the percentage of government-insured loans (which are not included in HMDA data) increased dramatically between 2006 and 2009, thus decreasing the proportion of total loans analyzed here. [15]

Figure G-4 examines results for Georgia and the United States. These data show higher denial rates for minority high-income households than for non-Hispanic white high-income households. Among high-income households applying for mortgages in 2006, 28 percent of African American applicants in Georgia had their applications denied compared with 7 percent of non-Hispanic white households. Loan denial rates in 2006 were also higher for Asian Americans, Hispanic Americans and Native Americans compared to non-Hispanic whites.

The data from 2009 still show denial rates that are higher for minority groups compared with non-Hispanic whites. The patterns of loan denial rates by race and ethnicity in Georgia were similar to those of the United States in both 2006 and 2009.

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[12] Financial institutions were required to report 2009 HMDA data if they had assets of more than $39 million ($35 million for 2006), had a branch office in a metropolitan area, and originated at least one home purchase or refinance loan in the reporting calendar year. Mortgage companies are required to report HMDA if they are for-profit institutions, had home purchase loan originations exceeding 10 percent of all loan obligations in the past year, are located in an Metropolitan Statistical Area (or originated five or more home purchase loans in an MSA) and either had more than $10 million in assets or made at least 100 home purchase or refinance loans in the calendar year.

[13] 2009 median family income was about $61,000 for the United States and $56,000 for Georgia (in 2009 dollars). Median family income for 2006 was about $62,000 for the United States and $60,000 for Georgia (in 2009 dollars). Source: U.S. Census Bureau, 2009 and 2006 American Community Surveys.

[14] According to an article by the Federal Reserve, the volume of reported loan applications and originations fell sharply from 2007 to 2008 after previously falling between 2006 and 2007. See Avery, Brevoort, and Canner, "The 2008 HMDA Data: The Mortgage Market during a Turbulent Year." Available online: http://www.federalreserve.gov/pubs/bulletin/.

[15] Loans insured by government programs have surged since 2006. In 2006, about 10 percent of first lien home loans were insured by a government program. More than half of home loans were insured by the government in 2009. Source: "The 2009 HMDA Data: The Mortgage Market in a Time of Low Interest Rates and Economic Distress," Federal Reserve Bulletin. December 2010, pp A39-A77.

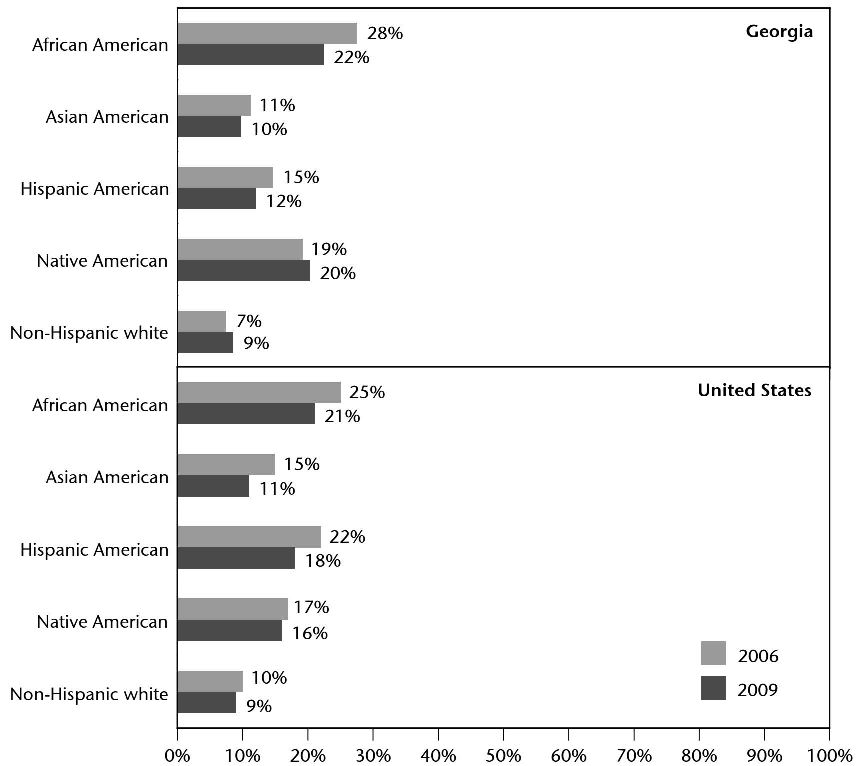
Figure G-4.
Denial rates of conventional purchase loans to high-income households, 2006 and 2009

Note:

High-income borrowers are those households with 120% or more than the HUD area median family income (MFI).

Source:

FFIEC HMDA data 2006 and 2009.



A number of national studies have examined disparities in loan denial rates and loan amounts for minorities in the presence of other influences. Examples include the following:

- A study by the Federal Reserve Bank of Boston is one of the most cited studies of mortgage lending discrimination.[16] It was conducted using the most comprehensive set of credit characteristics ever assembled for a study on mortgage discrimination.[17] The study provided persuasive evidence that lenders in the Boston area discriminated against minorities in 1990.[18]

- Using the Federal Reserve Board's 1983 Survey of Consumer Finances and the 1980 Census of Population and Housing data, logit statistical analysis revealed that minority households were one-third as likely to receive conventional loans as non-Hispanic white households after taking into account financial and demographic controls.[19]

- Findings from a Midwest study indicate a significant relationship between race and both the number and size of mortgage loans. Data matched on socioeconomic characteristics

[16] Munnell, Alicia H., Geoffrey Tootell, Lynn Browne and James McEneaney. 1996. "Mortgage Lending in Boston: Interpreting HMDA Data." The American Economic Review. 86: 25-53.

[17] Ladd, Helen F. 1998. "Evidence on Discrimination in Mortgage Lending." The Journal of Economic Perspectives. 12:41-62.

[18] Yinger, John. 1995. Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination. New York: Russell Sage Foundation, 71.

[19] Canner, Glenn B., Stuart A. Gabriel and J. Michael Woolley. 1991. "Race, Default Risk and Mortgage Lending: A Study of the FHA and Conventional Loan Markets." Southern Economic Journal. 58:249-262.

revealed that African American borrowers across 13 census tracts received significantly fewer and smaller loans compared to their white counterparts.[20]

However, other studies have found that differences in preferences for Federal Housing Administration (FHA) loans — mortgage loans that are insured by the government — versus conventional loans among racial and ethnic groups may partly explain disparities found in conventional loan approvals between minorities and non-minorities.[21] Several studies have found that, historically, minority borrowers are far more likely to obtain FHA loans than comparable non-Hispanic white borrowers at all income and wealth levels. The insurance on FHA loans protects the lender, but the borrower can be disadvantaged by higher borrowing costs. [22]

Subprime lending. Loan denial is one of several ways minorities might be discriminated against in the home mortgage market; mortgage-lending discrimination can also occur through higher fees and interest rates. The housing market provides a unique environment for this type of discrimination through fees associated with various loan types.

Until recently, one of the fastest growing segments of the home mortgage industry was subprime lending. From 1994 through 2003, subprime mortgage activity grew by 25 percent per year and accounted for $330 billion of U.S. mortgages in 2003, up from $35 billion a decade earlier. In 2006, subprime loans represented about one-fifth of all mortgages in the United States.[23]

With higher interest rates than prime loans, subprime loans have been typically marketed and sold to customers with blemished or limited credit histories who would not typically qualify for prime loans. Over time, these loans also became available to homeowners who did not want to make a down payment or provide proof of income and assets or wanted to purchase a larger home with a cost above that for which they would qualify from a prime lender.[24] Because of higher interest rates and additional costs, subprime loans affected homeowners' ability to grow home equity while simultaneously increasing their risk of foreclosure.

Although there is no standard definition of a subprime loan, there are several commonly-used approaches to examining rates of subprime lending. BBC used a "rate-spread method"— in which subprime loans are identified as those with substantially above-average interest rates — to measure rates of subprime lending in 2006 and 2009.[25] These results are presented in Figure G-5 and Figure G-6.

[20] Leahy, Peter J. 1985. "Are Racial Factors Important for the Allocation of Mortgage Money?: A Quasi-Experimental Approach to an Aspect of Discrimination." American Journal of Economics and Sociology. 44:185-196.

[21] Canner. 1991. "Race, Default Risk and Mortgage Lending: A Study of the FHA and Conventional Loan Markets."

[22] Yinger. 1995. Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination. 80.

[23] Avery, Brevoort, and Canner, "The 2006 HMDA Data." Federal Reserve Bulletin, December 2007, pp. A73-A109.

[24] Gerardi, Shapiro, and P. Willen. 2008. "Subprime Outcomes: Risky Mortgages, Homeownership Experiences, and Foreclosure. *Federal Reserve Bank of Boston*.

[25] Prior to October 2009, first lien loans were identified as subprime if they had an APR 3.0 percentage points or greater than the federal treasury security rate of like maturity. As of October 2009, rate spreads in HMDA data were calculated as the difference between APR and Average Prime Offer Rate, with subprime loans defined as 1.5 percentage points of rate spread or more. BBC identified subprime loans according to these measures in the corresponding time periods.

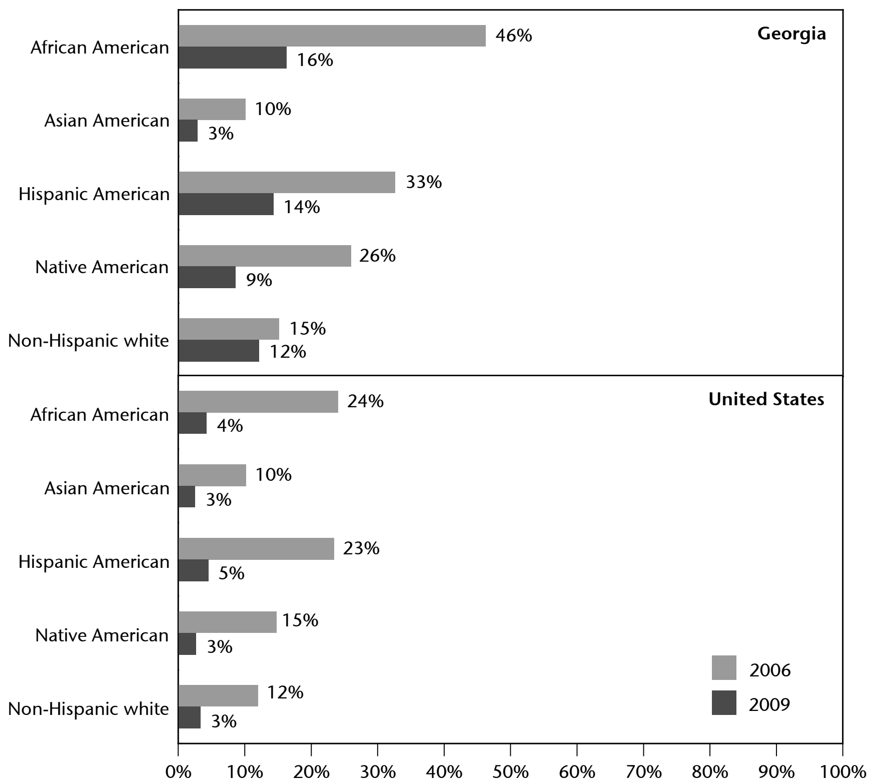
Because lending patterns and borrower motivations differ depending on the type of loan being sought, the study team separately considered home purchase loans and refinance loans. Results from the two methods for identifying patterns in subprime lending did not differ substantially.

Based on 2006 and 2009 HMDA data, Figure G-5 shows the percent of conventional home purchase loans that were subprime in Georgia and the United States. The rates of subprime lending in 2009 were dramatically lower overall than in 2006 due to the collapse of the mortgage lending market in the late 2000s.

In Georgia during the two years examined, African American, Hispanic American and Native American borrowers were more likely to receive subprime purchase loans than non-Hispanic whites. For example, in 2006, about 46 percent of conventional home purchase loans issued to African Americans were subprime. In contrast, subprime loans represented only about 15 percent of loans issued to non-Hispanic whites in Georgia in 2006. Asian Americans, however, were less likely than non-Hispanic whites to receive subprime loans in that year. By 2009, use of subprime loans diminished for all groups. Disparities remained for African Americans and Hispanic Americans, however.

Figure G-5.
Percent of conventional home purchase loans that were subprime, 2006 and 2009

Source:
FFIEC HMDA data 2006 and 2009.



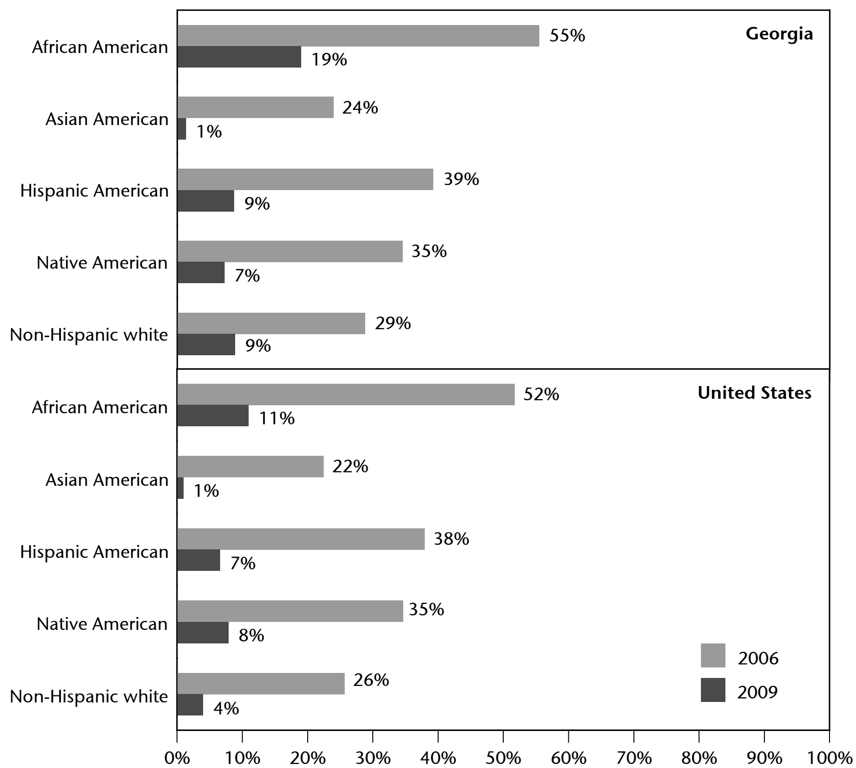
Similar to Figure G-5, Figure G-6 illustrates the percent of home refinance loans that were subprime in Georgia and the United States.

African American, Hispanic American and Native American borrowers were more likely to receive subprime refinance loans than non-Hispanic whites in 2006. In 2006, about 55 percent of refinance loans issued to African Americans, 39 percent of loans to Hispanic Americans and 35 percent of loans to Native Americans in Georgia were subprime. In contrast, subprime loans represented only about 29 percent of refinance loans issued to non-Hispanic whites in Georgia in 2006.

In 2009, subprime loans made up a much smaller proportion of total conventional home refinance loans in Georgia across race/ethnic groups. Even so, African American households receiving refinance loans in 2009 were more likely than non-Hispanic whites to receive a subprime loan. Hispanic American, Asian American and Native American households receiving refinance loans in 2009 were less likely to have a subprime loan than non-Hispanic whites.

Figure G-6. Percent of conventional refinancing loans that were subprime, 2006 and 2009

Source:
FFIEC HMDA data 2006 and 2009.



Some evidence suggests that lenders sought out and offered subprime loans to individuals who often would not be able to pay off the loan,[26] a form of "predatory lending." Furthermore, some research has found that many recipients of subprime loans could have qualified for prime loans.[27]

[26] Department of Housing and Urban Development (HUD) and the Department of Treasury. 2001. HUD-Treasury National Predatory Lending Task Force Report. *HUD*; Carr, J. and L. Kolluri. 2001. Predatory Lending: An Overview. *Fannie Mae Foundation*; and California Reinvestment Coalition, Community Reinvestment Association of North Carolina, Empire Justice Center, Massachusetts Affordable Housing Alliance, Neighborhood Economic Development Advocacy Project, Ohio Fair Lending Coalition and Woodstock Institute, 2008. "Paying More for the American Dream."

Previous studies of subprime lending suggest that predatory lenders have disproportionately targeted minorities. A 2001 HUD study using 1998 HMDA data found that subprime loans were disproportionately concentrated in black neighborhoods compared to white neighborhoods even after controlling for income.[28] For example, borrowers in upper-income black neighborhoods were six times more likely to refinance with a subprime loan than borrowers in upper-income white neighborhoods.

Historically, differences in types of loans awarded to minorities have also been attributed to steering by real estate agents, who serve as an information filter.[29] Some studies claim that real estate brokers provide different levels of assistance and different information on loans to minorities and non-minorities.[30] This "steering" can shape the perception by minority borrowers of the availability of loans.

Lessons from the recent mortgage lending crisis. The turmoil in the housing market since late 2006 has been far-reaching, resulting in the loss of home equity, decreased demand for housing and increased rates of foreclosure.[31] Much of the blame has been placed on risky practices in the mortgage industry including substantial increases in subprime lending.

As discussed above, subprime mortgages increased at an extraordinary rate between the mid-1990s and mid-2000s. These high-cost loans increased from 8 percent of originations in 2003 to 20 percent in both 2005 and 2006.[32] In 2005, subprime loans represented about 20 percent of all loans originated in the Atlanta Metropolitan Statistical Area (MSA).[33] The preponderance of subprime lending is important as households repaying subprime loans have a higher likelihood of delinquency or foreclosure. As a 2008 study released from the Federal Reserve Bank of Boston found, "homeownerships that begin with a subprime purchase mortgage end up in foreclosure almost 20 percent of the time, or more than 6 times as often as experiences that begin with prime purchase mortgages."[34]

While Georgia has not suffered to the same extent as states such as Nevada in terms of foreclosures and falling home values, the state has nevertheless been affected by the change in housing market conditions. In Georgia there were approximately 10,100 properties with foreclosure filings in October of 2011. This represents one in every 406 housing units and gives Georgia the sixth highest foreclosure rate in the nation.[35] In October 2011, the proportion of residential properties in Georgia

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[27] Freddie Mac. 1996, September. "Automated Underwriting: Making Mortgage Lending Simpler and Fairer for America's Families." *Freddie Mac.* (accessed February 5, 2007); and Lanzerotti. 2006. "Homeownership at High Cost: Foreclosure Risk and High Cost Loans in California." *Federal Reserve Bank of San Francisco*.

[28] Department of Housing and Urban Development (HUD) and the Department of Treasury. 2001.

[29] Kantor, Amy C. and John D. Nystuen. 1982. "De Facto Redlining a Geographic View." *Economic Geography.* 4:309-328.

[30] Yinger. 1995. Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination. 78–79.

[31] Joint Center for Housing Studies of Harvard University. 2008. "The State of the Nation's Housing."

[32] Ibid.

[33] Mayer, Chris and Karen Perce. "Subprime Mortgage: Who, Where and to Whom?" *Division of Research and Statistics and Monetary Affairs.* Available online at http://www.federalreserve.gov/Pubs/FEDS/2008/200829/200829abs.html.

[34] Gerardi, Shapiro, and P. Willen. 2008. "Subprime Outcomes: Risky Mortgages, Homeownership Experiences, and Foreclosure. *Federal Reserve Bank of Boston*.

[35]RealtyTrac. 2011 U.S. Foreclosure Market Report.™ Available online at http://www.realtytrac.com.

with negative equity (a mortgage worth more than the value of the home) was 30 percent, one of the highest rates in the country. In the third quarter of 2011, Georgia passed California with the fifth highest negative equity percentage (behind Nevada, Arizona, Florida and Michigan).[36] Due to higher rates of subprime mortgages, it is likely that minority homeowners have been disproportionately affected in terms of foreclosures and loss of home equity.

These problems facing the housing industry substantially impact the ability to secure capital through home mortgages to start or expand a small business. This issue has been highlighted in statements made by members of the Board of Governors of the Federal Reserve System to the U.S. Senate and U.S. House of Representatives:

- On April 16, 2008, Frederic Mishkin informed the U.S. Senate Committee on Small Business and Entrepreneurship that "one of the most important concerns about the future prospects for small business access to credit is that many small businesses use real estate assets to secure their loans. Looking forward, continuing declines in the value of their real estate assets clearly have the potential to substantially affect the ability of those small businesses to borrow. Indeed, anecdotal stories to this effect have already appeared in the press." [37]

- On November 20, 2008, Randall Kroszner told the U.S. House of Representatives Committee on Small Business that "small business and household finances are, in practice, very closely intertwined. [T]he most recent Survey of Small Business Finances (SSBF) indicated that about 15 percent of the total value of small business loans in 2003 was collateralized by 'personal' real estate. Because the condition of household balance sheets can be relevant to the ability of some small businesses to obtain credit, the fact that declining house prices have weakened household balance-sheet positions suggests that the housing market crisis has likely had an adverse impact on the volume and price of credit that small businesses are able to raise over and above the effects of the broader credit market turmoil." [38]

Federal Reserve Chairman Ben Bernanke recognized the reality of these concerns in a speech titled "Restoring the Flow of Credit to Small Businesses" on July 12, 2010.[39] Bernanke indicated that small businesses have had difficulty accessing credit and pointed to the declining value of real estate as one of the primary obstacles.

Furthermore, the National Federation of Independent Business (NFIB) conducted a national survey of 751 small businesses[40] in late 2009 to investigate how the recession impacted access to capital.[41]

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[36] CoreLogic. November 29, 2011. CoreLogic Negative Equity press release.

[37] Mishkin, Frederic. 2008. "Statement of Frederic S. Mishkin, Member, Board of Governors of the Federal Reserve System before the Committee on Small Business and Entrepreneurship, U.S. Senate on April 16."

[38] Kroszner, Randall. 2008. "Effects of the financial crisis on small business." *Testimony before the Committee on Small Business, U.S. House of Representative on November 20.*

[39] Bernanke, Ben. 2010. Restoring the Flow of Credit to Small Businesses. *Presented at the Federal Reserve Meeting Series: Addressing the Financing Needs of Small Businesses on July 12.*

[40] The study defined a small business as a business employing no less than one individual in addition to the owner(s) and no more than 250.

[41] National Federation of Independent Business (NFIB). 2010. Small Business Credit in a Deep Recession.

NFIB concluded that "falling real estate values (residential and commercial) severely limit small business owner capacity to borrow and strains currently outstanding credit relationships." Survey results indicated that 95 percent of small business employers owned real estate and 13 percent held upside-down property.[42]

Opportunities to obtain business capital through home mortgages appear to be limited especially for homeowners with little home equity. Furthermore, the increasing rates of default and foreclosure, especially for homeowners with subprime loans, reflect shrinking access to capital available through these loans. These consequences are likely to have a disproportionate impact on minorities in terms of both homeownership and the ability to secure capital for business start-up and growth.

Redlining. Redlining refers to mortgage lending discrimination against geographic areas associated with high lender risk. These areas are often racially determined, such as African American or mixed race neighborhoods.[43] This practice can perpetuate problems in already poor neighborhoods.[44]

Studies of redlining have primarily focused on the geographic aspect of lender decisions; however, redlining can also include the practice of restricting credit flows to minority neighborhoods through procedures that are not observable in actual loan decisions. Examples include branch placement, advertising and other pre-application procedures.[45] These practices can deter minorities from starting businesses. Locations of financial institutions are important to small business start-up because local banking sectors often finance local business. [46] Redlining practices would deny this capital resource to minorities.

For example, the United States Department of Justice brought suit in 1992 against Decatur Federal Savings & Loan Association of Atlanta for racial discrimination in mortgage lending. The Justice Department alleged that Decatur Federal had for many years engaged in lending practices that discriminated on the basis of race, including redlining. The Justice Department also alleged that Decatur Federal had discriminated against black mortgage applicants. Decatur Federal entered a consent decree in which it agreed to change certain banking practices.[47]

Gender discrimination in mortgage lending. Relatively little information is available on gender-based discrimination in mortgage lending markets. Historically, lending practices overtly discriminated against women by requiring information on marital and childbearing status. Risk associated with women of childbearing age and unmarried women resulted in "income discounting," limiting the availability of loans to women.[48]

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[42] Upside-down is defined as a mortgage that is worth more than the appraised value of the house.

[43] Holloway, Steven R. 1998. "Exploring the Neighborhood Contingency of Race Discrimination in Mortgage Lending in Columbus, Ohio." *Annals of the Association of American Geographers.* 88:252-276.

[44] Ladd, Helen F. 1998. "Evidence on Discrimination in Mortgage Lending." *The Journal of Economic Perspectives.* 12:41-62.

[45] Yinger, John. 1995. "Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination." Russell Sage Foundation. New York. 78-79.

[46] Holloway. 1998. "Exploring the Neighborhood Contingency of Race Discrimination in Mortgage Lending in Columbus, Ohio."

[47] *United States of America v. Decatur Federal Savings and Loan Association*, No. 92-CV-2198 (N.D. Georgia, Sept. 17, 2992), Consent Decree.

[48] Card. 1980. "Women, Housing Access, and Mortgage Credit."

The Equal Credit Opportunity Act (ECOA) in 1973 suspended these discriminatory lending practices. A study in California that used regression analysis to explore discrimination against married and single women in 16 metropolitan areas from 1977 to 1978 revealed little evidence of gender discrimination in the state. Certain barriers have continued after 1973, however. For example, there is some past evidence that lenders under-appraised property for female borrowers.[49]

Steering by real estate agents. A number of researchers have found that discrimination by real estate agents contributes to residential segregation of minorities. One such practice is "steering" of prospective homebuyers toward particular neighborhoods and away from others because of their race or ethnicity (a practice that has been prohibited by law for many decades). A 2005 study found such practices in cities throughout the country. [50]

Access to Business Capital

Barriers to capital markets can have significant impacts on small business formation and expansion. In addition, several studies have found evidence that start-up capital is important for business profits, longevity and other outcomes.[51]

- The amount of start-up capital is positively associated with small business sales and other outcomes;[52]
- Limited access to capital has limited the size of African American-owned businesses;[53] and
- Weak financial capital was identified as a significant reason that more African American-owned firms than non-Hispanic white-owned firms closed over a four-year period.[54]

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[49] Ladd, Helen F. 1982. "Equal Credit Opportunity: Women and Mortgage Credit." *The American Economic Review*. 72:166-170.

[50] Galster, George and Erin Godfrey. 2005. "Racial Steering by Real Estate Agents in the U.S. in 2000." *Journal of the American Planning Association.* 71:251-268.

[51] For examples see Fairlie. 2006. "Liquidity Constraints, Household Wealth, and Entrepreneurship Revisited;" and Grown, Caren and Timothy Bates. 1991. "Commercial Bank Lending Practices and the Development of Black-Owned Construction Companies." Center for Economic Studies, U.S. Bureau of the Census.

[52] Ibid.

[53] Grown. 1991. "Commercial Bank Lending Practices and the Development of Black-Owned Construction Companies."

[54] Ibid.

Bank loans are one of the largest sources of debt capital for small businesses.[55] Discrimination in the application and approval processes of these loans and other credit resources could be detrimental to the success of minority- and women-owned businesses. Previous studies have addressed race/ethnicity and gender discrimination in capital markets by evaluating:

- Loan denial rates;
- Loan values;
- Interest rates;
- Individual assumptions that loan applications will be rejected;
- Sources of capital; and
- Relationships between start-up capital and business survival.

To examine the role of race/ethnicity and gender in capital markets, the study team analyzed data from the Federal Reserve Board's 1998 and 2003 Survey of Small Business Finances (SSBF), the most comprehensive national source of credit characteristics of small firms (firms with fewer than 500 employees). The survey contains information on loan denial and interest rates, as well as anecdotal information from firms. Sample weights are applied to provide representative estimates. The samples from 1998 and 2003 contain records for 3,521 and 4,240 firms, respectively.

The SSBF records the geographic location of the firm by Census Division, not city, county or state. The South Atlantic Census Division (referred to below as the South Atlantic region) contains Georgia, along with Delaware, District of Columbia, Florida, Maryland, North Carolina, South Carolina, Virginia and West Virginia. This is the greatest level of geographic detail available for SSBF data, and 2003 remains the most recent information as the survey was discontinued after that year.

Loan denial rates. Figure G-7 shows loan denial rates from the 1998 and 2003 SSBFs for the South Atlantic region and the United States. National SSBF data for 1998 reveal the following:

- African American-owned businesses experienced higher rates of denial compared to all other racial and ethnic groups;
- African American-, Hispanic American- and Asian American-owned firms had a loan denial rate considerably above that of non-Hispanic white male-owned firms (in each case a statistically significant difference); and
- A larger proportion of women-owned firms than male-owned firms were denied business loans.

[55] Data from the 1998 SSBF indicates that 70 percent of loans to small business are from commercial banks. This result is present across all gender, race and ethnic groups with the exception of African Americans, whose rate of lending from commercial banks is even greater than other minorities. See Blanchard, Lloyd, Bo Zhao and John Yinger. 2005. "Do Credit Market Barriers Exist for Minority and Woman Entrepreneurs." *Center for Policy Research, Syracuse University.*

Measured against rates of loan denial for non-Hispanic white- and male-owned firms in 2003, loan denial rates were higher for minority- and women-owned firms in the United States. The loan denial rate for African American-owned firms in 2003 was substantially higher than rates for other groups (51%).

Loan denial statistics on individual minority groups in the South Atlantic region are not reported in Figure G-7 due to small sample sizes. However, about 31 percent of minority- and women-owned firms in the South Atlantic region reported being denied loans in 1998, a larger proportion than the 17 percent of non-Hispanic white male-owned firms that were denied. This difference was also evident in the 2003 SSBF data for the South Atlantic region, where 26 percent of minority- and women-owned firms reported being denied loans, compared to 7 percent of non-Hispanic white male-owned firms.

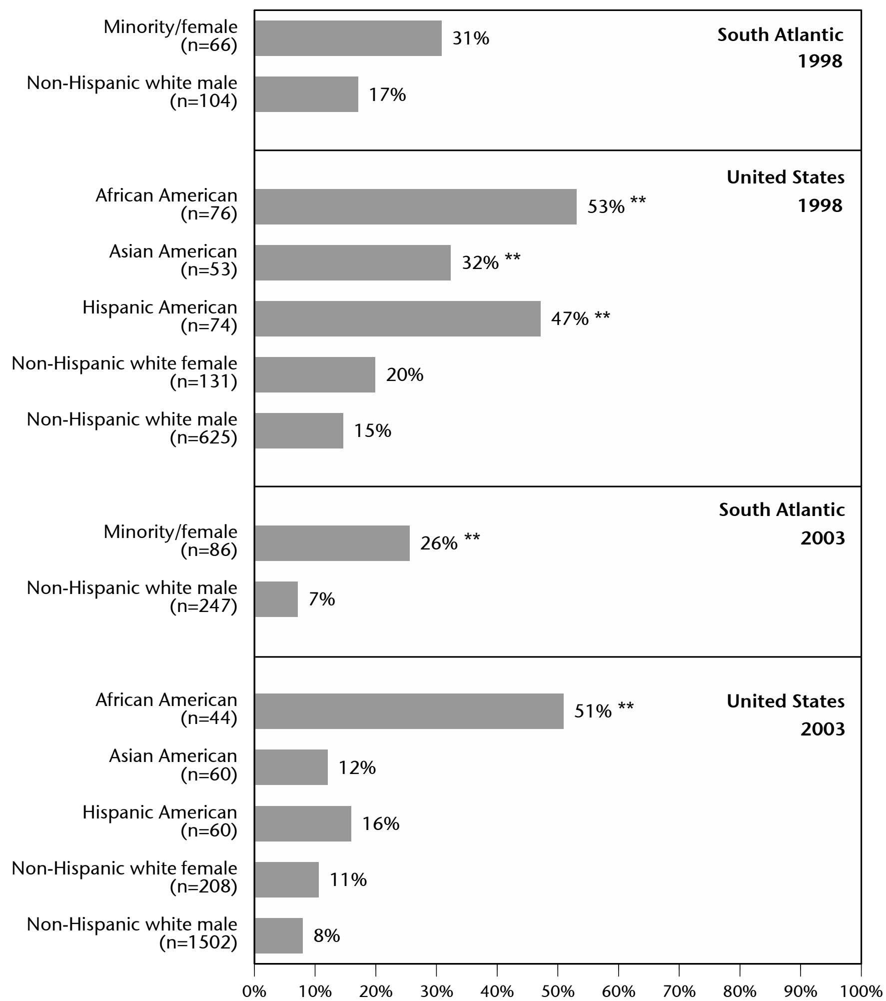
Figure G-7.
Business loan denial rates, 1998 and 2003

Note:

** Denotes that the difference in proportion from non-Hispanic white male-owned firms is statistically significant at the 95% confidence level.

Source:

BBC Research & Consulting from 1998 and 2003 Survey of Small Business Finances.



Regression analyses of loan denial rates. A number of studies have investigated whether disparities in loan denial rates for different race/ethnicity and gender groups exist after controlling for other factors that affect loan approvals. Findings from these studies include:

- Commercial banks are less likely to loan to African American-owned firms than to non-Hispanic white-owned firms after controlling for other factors.[56]

- African American, Hispanic American and Asian American men are more likely to be denied a loan than non-Hispanic white men. However, African American borrowers are more likely to apply for a loan.[57]

- Disparities in loan denial rates between African American-owned and non-Hispanic white-owned firms tend to decrease with increasing competitiveness of lender markets. A similar phenomenon is observed when considering differences in loan denial rates between male- and female-owned firms. [58]

- The probability of loan denial decreases with greater personal wealth. However, controlling for personal wealth does not resolve the large differences in denial rates across African American-, Hispanic American-, Asian American-, and non-Hispanic white-owned firms. Specifically, information on personal wealth explained some differences for Hispanic- and Asian American-owned firms compared to non-Hispanic whites, but almost none for African American-owned firms.[59]

- Loan denial rates are significantly higher for African American-owned firms than non-Hispanic white-owned firms in the presence of several other factors such as creditworthiness and other characteristics. This result is largely insensitive to specification of the model. Consistent evidence on loan denial rates and other indicators of discrimination in credit markets was not found for other minorities and women.[60]

- Women-owned businesses are no less likely to apply for or to be approved for loans in comparison to firms owned by men.[61]

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[56] Cavalluzzo, Ken, Linda Cavalluzzo and John Wolken. 2002. "Competition, Small Business Financing and Discrimination: Evidence from a New Survey." *Journal of Business.* 75: 641-679.

[57] Coleman, Susan. 2002. "Characteristics and Borrowing Behavior of Small, Women-owned Firms: Evidence from the 1998 National Survey of Small Business Finances." *The Journal of Business and Entrepreneurship.* 151-166.

[58] Cavalluzzo, 2002. "Competition, Small Business Financing and Discrimination: Evidence from a New Survey."

[59] Cavalluzzo, Ken and John Wolken. 2002. "Small Business Turndowns, Personal Wealth and Discrimination." *FEDS Working Paper No. 2002-35.*

[60] Blanchflower, David G., Phillip B. Levine and David J. Zimmerman. 2003. "Discrimination in the Small Business Credit Market." *The Review of Economics and Statistics.* 85:930-943.

[61] Coleman. 2002. "Characteristics and Borrowing Behavior of Small, Women-owned Firms: Evidence from the 1998 National Survey of Small Business Finances."

BBC regression model for the 1998 SSBF. The study team conducted its own analysis of the 1998 SSBF by developing a model to explore the relationships between loan denial and race/ethnicity and gender of firm ownership while controlling for other factors.[62] As discussed above, there is extensive literature on business loan denials that provides the theoretical basis for the regression models. Many studies have used probit econometric models to investigate the effects of various owner, firm and loan characteristics, including the race and gender of the ownership, on the likelihood of being denied a loan. The standard model includes three general categories of variables including:

- The owner's demographic characteristics (including race and gender), credit and resources (12 variables);
- The firm's characteristics, credit and financial health (29 variables); and
- The environment in which the firm and lender operate and characteristics of the loan (19 variables). [63]

After excluding a small number of observations where the loan outcome was imputed, the national sample included 931 firms that had applied for a loan during the three years preceding the survey. The South Atlantic region included 161 such firms.

Given the relatively small sample size and the large number of variables, the study team developed a model based on firms located in the U.S. and estimated any South Atlantic region effects by including regional control variables — an approach commonly used in other studies that analyze these data.[64] The regional variables include an indicator variable for firms located in the South Atlantic region and interaction variables that represent firms owned by minorities or women and are located in the South Atlantic region.

Figure G-8 presents the coefficients and t-statistics from the probit model predicting loan denials. The results from the model indicate that a number of neutral factors affect the probability of loan denial with statistical significance:

- Having a four-year degree lowers the probability of loan denial;
- Business owners who filed for bankruptcy in the past seven years or have had a judgment against them are more likely to be denied a loan;
- Family-owned businesses are more likely to be denied;

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[62] BBC performed the regression analysis using the 1998 SSBF — as opposed to the 2003 SSBF — to capitalize on oversampling of minority-owned businesses in the national dataset in 1998 (not done in 2003).

[63] See, for example, Blanchard, Lloyd; Zao, Bo and John Yinger. 2005. "Do Credit Barriers Exist for Minority and Women Entrepreneurs?" *Center for Policy Research, Syracuse University.*

[64] Blanchflower, David G.; Levine, Phillip B. and David J. Zimmerman. 2003. "Discrimination in the Small-Business Credit Market." *The Review of Economics and Statistics*. 85(4): 930-943; NERA Economic Consulting. 2008. "Race, Sex, and Business Enterprise: Evidence from the City of Austin." *Prepared for the City of Austin, Texas*; and CRA International. 2007. "Measuring Minority- and Woman-Owned Construction and Professional Service Firm Availability and Utilization. *Prepared for Santa Clara Valley Transportation Authority.*

- Businesses with an existing line of credit, an existing mortgage, or existing vehicle or equipment loans are less likely to be denied a loan. However, firms with outstanding loans from stockholders are more likely to be denied;

- Firms that have been delinquent in business transactions have a higher probability of being denied a loan;

- Being in the construction industry increases the likelihood of loan denial;

- Firms in highly-concentrated industry segments (as measured by the Herfindahl index) are more likely to be denied; and

- Business mortgage applications and vehicle and equipment loan applications are less likely to be denied than other types of business loans.

Even after controlling for neutral influences, firms owned by African Americans, Hispanic Americans and Asian Americans were more likely to have their loans denied than other firms (all statistically significant differences). The indicator variable for the South Atlantic region and the interaction terms for South Atlantic region and African American- and women-ownership are not statistically significant. This result implies that the probabilities of loan denials for African American- and women-owned firms within the South Atlantic region are not statistically different from the U.S. as a whole. However, Hispanic Americans in the South Atlantic region were less likely to have their loans denied than Hispanic Americans in the U.S. as a whole (a statistically significant difference).

Figure G-8.
Likelihood of business loan denial (probit regression) in the U.S. in the 1998 SSBF, Dependent variable: loan denial

Variable	Coefficient	t-statistic
Race/ethnicity and gender		
Constant	-5.619290	-4.29 **
African American	1.116122	3.91 **
Asian American	0.591101	2.04 **
Hispanic American	1.244493	5.26 **
Female	-0.079250	-0.44
South Atlantic (SA) region	0.139515	0.53
African American in SA region	-0.062685	-0.12
Hispanic American in SA region	-1.256719	-2.14 **
Female in SA region	0.220593	0.51
Owner's characteristics, credit and resources		
Age	0.010133	1.27
Owner experience	0.008516	0.81
Less than high school education	0.300144	0.88
Some college	-0.104356	-0.50
Four-year degree	-0.497340	-2.23 **
Advanced degree	-0.372587	-1.55
Bankruptcy in past 7 years	1.504404	2.83 **
Judgement against in past 3 years	1.097196	3.49 **
Log of net worth excluding home	-0.043445	-0.79
Owner has negative net worth	-0.694371	-1.03

Variable	Coefficient	t-statistic
Firm's characteristics, credit and financial health		
D&B credit score = moderate risk	0.662866	1.22
D&B credit score = average risk	0.739182	1.38
D&B credit score = significant risk	0.482355	0.87
D&B credit score = high risk	0.463841	0.80
Total employees	-0.001146	-0.39
Percent of business owned by principal	-0.003902	-0.83
Family-owned business	0.712623	2.40 **
Firm purchased	-0.345877	-1.70 *
Firm inherited	0.055522	0.16
Firm age	-0.012951	-1.21
Firm has checking account	0.408644	1.23
Firm has savings account	-0.196643	-1.11
Firm has line of credit	-0.943682	-5.10 **
Existing capital leases	-0.135828	-0.68
Existing mortgage for business	-0.396853	-1.90 *
Existing vehicle loans	-0.529937	-2.88 **
Existing equipment loans	-0.508333	-2.34 **
Existing loans from stockholders	0.565370	2.71 **
Other existing loans	-0.121736	-0.63
Firm used trade credit in past year	-0.236970	-1.48
Log of total sales in prior year	-0.004571	-0.07
Negative sales in prior year	0.289566	0.36
Log of cost of doing business in prior year	0.009130	0.18
Log of total assets	0.020691	0.29
Negative total assets	-0.597249	-0.67
Log of total equity	0.098601	1.32
Negative total equity	1.047813	1.37
Firm bankruptcy in past 7 years	0.581274	1.18
Firm delinquency in business transactions	1.169890	6.24 **

Variable	Coefficient	t-statistic
Firm and lender environment and loan characteristics		
Partnership	0.052549	0.16
S corporation	-0.263722	-1.12
C corporation	-0.315194	-1.15
Construction industry	0.459936	1.71 *
Manufacturing industry	0.142339	0.52
Transportation, communications and utilities industry	0.334972	0.74
Finance, insurance and real estate industries	-0.163856	-0.45
Engineering industry	0.606954	1.63
Other industry	0.237486	1.23
Herfindahl index = .10 to .18	2.363897	4.62 **
Herfindahl index = .18 or above	2.755233	5.34 **
Located in MSA	0.184649	1.00
Sales market local only	0.134497	0.84
Loan amount	0.000000	-0.38
Capital lease application	-0.119932	-0.34
Business mortgage application	-0.744808	-2.68 **
Vehicle loan application	-1.277041	-3.94 **
Equipment loan application	-0.813908	-2.83 **
Loan for other purposes	-0.343966	-1.68 *

Note: * Statistically significant at 90% confidence level.
** Statistically significant at 95% confidence level.

Source: BBC Research & Consulting analysis of 1998 SSBF data.

The study team simulated loan approval rates for those minority groups with statistically significant disparities (African Americans, Asian Americans and Hispanic Americans) by comparing observed approval rates with simulated rates. The study team simulated the rates by inputting observed variables for those minorities into a probit model developed for non-Hispanic white male-owned firms that includes the effects of a business being in the South Atlantic region.[65] Figure G-9 shows these simulated loan approval rates in comparison to the actual approval rates observed in the 1998 SSBF.

**Figure G-9.
Comparison of actual loan approval rates to simulated
loan approval rates, 1998**

Group	Loan Approval rates Actual	Loan Approval rates Benchmark	Disparity index (100 = parity)
African American	46.4%	74.6%	62
Asian American	69.4%	83.8%	83
Hispanic American	53.7%	81.8%	66

Note:

Actual approval rates presented here and denial rates in Figure G-7 do not sum to 100% because some observations were dropped in the probit regression.

Source:

BBC Research & Consulting analysis of 1998 NSSBF data.

Based on 1998 SSBF data, the observed loan approval rate was 46 percent for African American-owned firms that applied for loans. Model results show that African American-owned firms would have an approval rate of about 75 percent if they were approved at the same rate as similarly situated firms owned by non-Hispanic whites. For Asian Americans, the actual loan approval rate was 69 percent, compared to a rate of 84 percent if they were approved at the same rate as similarly situated firms owned by non-Hispanic whites. Hispanic American-owned firms experienced a 54 percent loan approval rate, compared to 82 percent for similarly situated non-Hispanic white-owned firms.

Other researchers' analyses of the 2003 SSBF. Summary statistics from the 2003 SSBF of loan denial rates by race and ethnicity are presented at the beginning of this section. While these data are the most recent information collected from small businesses, the study team selected the data from the 1998 SSBF to conduct the econometric analysis to capitalize on the over-sampling of minority-owned business in the 1998 SSBF (not done in the 2003 SSBF).[66]

However, other recent studies elected to incorporate the 2003 SSBF into the analysis, while at the same time acknowledging the drawbacks of these data. In a 2009 study prepared for the Augusta-Richmond County, Georgia, NERA Economic Consulting (NERA) presented results from models using the 1993, 1998 and 2003 SSBFs, while focusing the analysis on the 1993 data. NERA investigated factors influencing loan denial rates using a probit econometric model. At a national level, their results using the 1998 SSBF are consistent with BBC's findings. When using the 2003 SSBF data, however, they find that loan denial rates for Hispanic-owned firms are not significantly different

[65] The approval rate is equal to one minus the denial rate.

[66] In the 1998 data, 7.3 percent of the firms surveyed were owned by Hispanic Americans, however in 2003 that number dropped to 4 percent. Numbers dropped from 7.7 percent to 2.8 percent and 5.7 percent to 4.2 percent for African American-owned and Asian American-owned firms, respectively. This decrease in minority samples impacts the precision of econometric analysis used to investigate disparities in loan denial rates for minority groups.

from rates for non-Hispanic white-owned firms. [67] The results of NERA's probit regression models at the national level are summarized in Figure G-10.

Figure G-10.
Likelihood of loan denial:
Results from 2009 NERA Augusta-Richmond County study

Note:

N/A: not applicable.

The model specifications included controls for owner characteristics, business characteristics, geographic characteristics, personal financial history, business financial history and use of financial services.

Source:

NERA Economic Consulting, 2009. "Race, Sex and Business Enterprise: Evidence from Augusta, Georgia."

	Statistical significance	Likelihood of loan denial
1998 SSBF		
African American	Yes	Higher
Asian American	No	N/A
Hispanic American	Yes	Higher
Female	No	N/A
2003 SSBF		
African American	Yes	Higher
Asian American	No	N/A
Hispanic American	No	N/A
Native/Other	No	N/A
Female	No	N/A

Charles River Associates (CRA) also incorporated the 2003 SSBF in a study prepared for the Santa Clara Valley Transportation Authority. Combining data from the 1998 and 2003 SSBFs, the CRA study reveals possible disparities in loan denial by race/ethnicity and gender using a probit econometric model and controlling for other factors. Figure G-11 shows a summary of their results.

Figure G-11.
Likelihood of loan denial:
Findings from 2007 CRA study using 1998 and 2003 SSBF data

Note:

N/A: not applicable.

The model specification included controls for owner characteristics, business characteristics, geographic characteristics, business performance, personal financial history, business financial history, use of financial services and loan application characteristics.

While the study does not find differences in the likelihood of loan denial for female-owned business at a national level, the results indicate that female-owned firms have a lower likelihood of denial in the Pacific region.

Source:

CRA International. 2007. "Measuring Minority- and Woman-Owned Construction and Professional Service Firm Availability and Utilization." Prepared for Santa Clara Valley Transportation Authority.

	Statistical significance	Likelihood of loan denial
African American	Yes	Higher
Asian American	Yes	Higher
Hispanic American	Yes	Higher
Female	No	N/A

Consistent with BBC's results, CRA's analysis indicates that African American- and Hispanic-owned firms have higher probabilities of loan denial. They also find that Asian-owned firms are more likely to be denied loans.[68]

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[67] NERA Economic Consulting. 2009. "Race, Sex, and Business Enterprise: Evidence from Augusta, Georgia." *Prepared for Augusta-Richmond County, Georgia.*

[68] CRA International. 2007. "Measuring Minority- and Woman-Owned Construction and Professional Service Firm Availability and Utilization." *Prepared for Santa Clara Valley Transportation Authority.*

Applying for loans. Fear of loan denial can be a barrier to capital markets as it prevents small businesses from applying for needed loans and thus can help explain differences in business outcomes. An examination of this fear provides insight into minority business owners' perceptions of the small business lending market. Using data from the 1998 and 2003 SSBF, Figure G-12 shows the proportion of firms that reported needing credit but did not apply for fear of denial.

In 1998 and 2003, minority- and women-owned firms were more likely than non-Hispanic white male-owned firms to forgo applying for loans due to fear of denial, both in the South Atlantic region and nationally. In 1998, for example, about 30 percent of minority- and women-owned firms in the South Atlantic region indicated that they had not applied for loans for this reason, compared to 21 percent of non-Hispanic white male-owned firms.

At the national level in 1998 and 2003, disparities were greatest for African American- and Hispanic American-owned business.

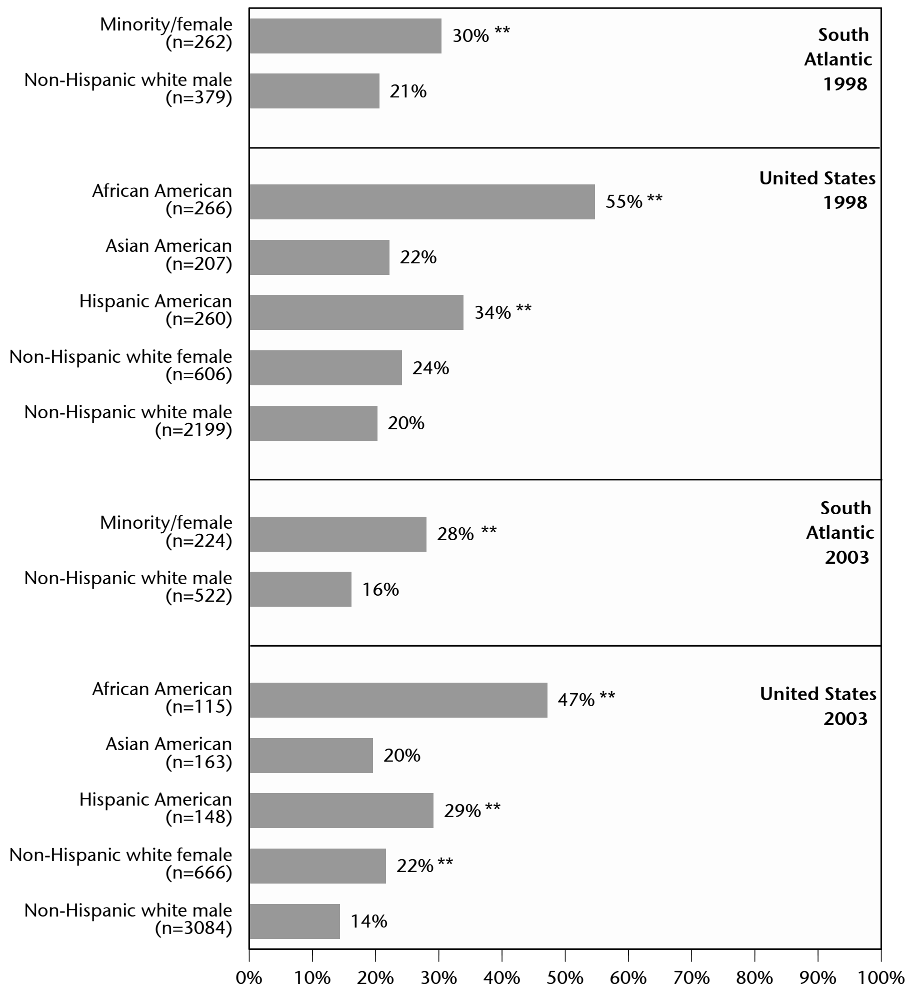
Figure G-12.
Firms that needed loans but did not apply due to fear of denial, 1998 and 2003

Note:

** Denotes that the difference in proportions from non-Hispanic white male-owned firms is statistically significant at the 95% confidence level.

Source:

BBC Research & Consulting from 1998 and 2003 Survey of Small Business Finances.



NERA's study in Augusta, Georgia also included an econometric model to investigate firms that have not applied for loans due to fear of denial. The model explored whether differences between race/ethnicity and gender groups exist after controlling for other factors. Figure G-13 presents a summary of their findings for the South Atlantic region, which includes Georgia.

Figure G-13.
Fear of loan denial:
Findings from 2009 NERA Augusta-Richmond County study, South Atlanta region only

Note:

N/A: not applicable.

The model specifications included controls for owner characteristics, business characteristics, geographic characteristics, personal financial history, business financial history and use of financial services.

Source:

NERA Economic Consulting, 2009. "Race, Sex and Business Enterprise: Evidence from Augusta, Georgia."

	Statistical significance	Likelihood of not applying for a loan for fear of denial
1998 SSBF		
African American	Yes	Higher
Asian American	No	N/A
Hispanic American	No	N/A
Female	No	N/A
2003 SSBF		
African American	Yes	Higher
Asian American	No	N/A
Hispanic American	No	N/A
Native/Other	No	N/A
Female	Yes	Higher

NERA's results indicate that African American-owned businesses in the South Atlantic region are more likely to not apply for a loan for fear of denial, a result also evident at the national level.[69]

In its study for the Santa Clara Valley Transportation Authority, CRA used an econometric model to investigate firms that did not apply for loans for fear of denial. The model explored whether differences between race/ethnicity and gender groups exist after controlling for other factors. As explained above, CRA based its analysis on combined data from the 1998 and 2003 SSBFs. Figure G-14 presents a summary of their findings.

Figure G-14.
Fear of loan denial:
Findings from 2007 CRA study using 1998 and 2003 SSBF data

Note:

N/A: not applicable.

The model specification included controls for owner characteristics, business characteristics, geographic characteristics, personal financial history, business financial history and use of financial services.

Source:

CRA International. 2007. "Measuring Minority- and Woman-Owned Construction and Professional Service Firm Availability and Utilization." Prepared for Santa Clara Valley Transportation Authority.

	Statistical significance	Likelihood of not applying for a loan due to fear of denial
African American	Yes	Higher
Asian American	No	N/A
Hispanic American	Yes	Higher
Female	No	N/A

Results from CRA's model indicate that African American- and Hispanic American-owned businesses are more likely to not apply out of fear of being denied.[70]

[69] NERA Economic Consulting, 2009. "Race, Sex and Business Ownership: Evidence from Augusta, Georgia." *Prepared for Augusta-Richmond County, Georgia.*

[70] CRA International. 2007. "Measuring Minority- and Woman-Owned Construction and Professional Service Firm Availability and Utilization. *Prepared for Santa Clara Valley Transportation Authority.*

Other studies have identified factors that influence the decision to apply for a loan, such as firm size, firm age, owner age and educational attainment. Controlling for these factors can help in determining whether race and ethnicity explain fear of loan denial. Findings indicate:

- One study found that African American- and Hispanic American-owners were significantly less likely to apply for loans.[71]
- Another study concluded that, after controlling for educational attainment, there were no significant differences in loan application rates between non-Hispanic white, African American, Hispanic American and Asian American men.[72]
- A third study revealed that African American-owned firms were more likely than other firms to report being seriously concerned with credit markets and were less likely to apply for credit in fear of denial.[73]

[71] Cavalluzzo, 2002. "Competition, Small Business Financing and Discrimination: Evidence from a New Survey."

[72] Coleman, Susan. 2004. "Access to Debt Capital for Small Women- and Minority-Owned Firms: Does Educational Attainment Have an Impact?" *Journal of Developmental Entrepreneurship*. 9:127-144.

[73] Blanchflower et al., 2003. Discrimination in the Small Business Credit Market.

Loan values. The study team also considered average loan values for firms that received loans. Results from the 1998 and 2003 SSBFs for mean loan values awarded by racial and ethnic group are presented in Figure G-15. In both 1998 and 2003, minority- and women-owned firms in the South Atlantic region received loans that amounted to less, on average, than loan amounts awarded to non-Hispanic white male-owned firms.

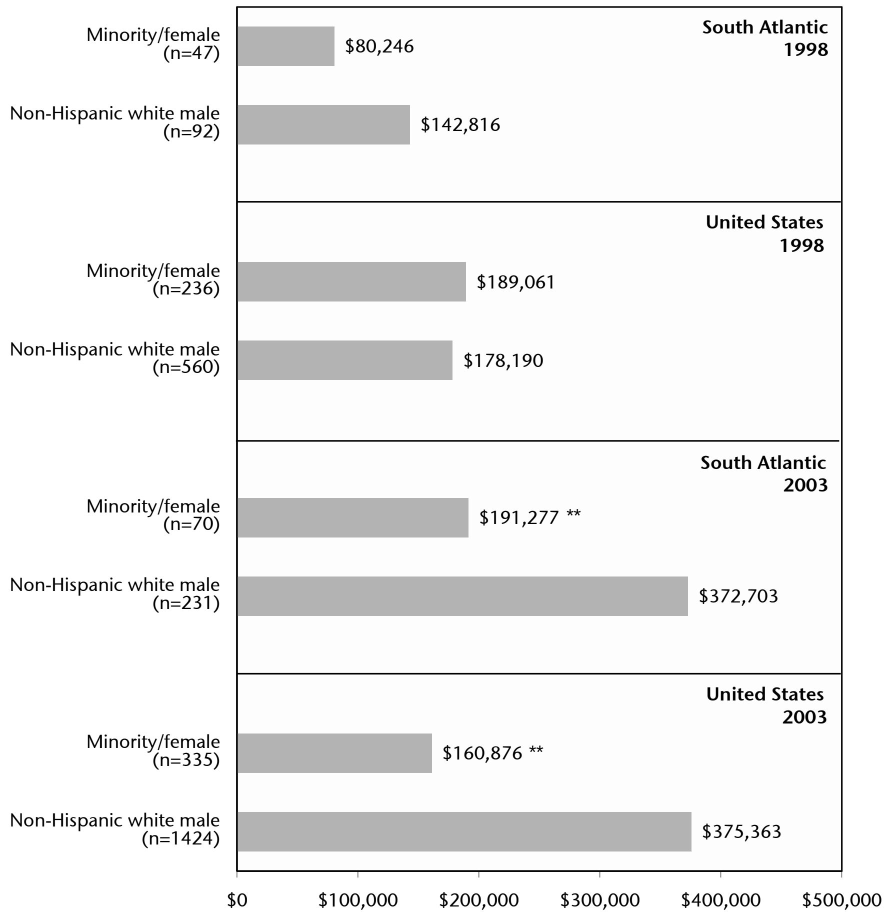
Figure G-15. Mean value of approved business loans, 1998 and 2003

Note:

** Denotes that the difference in means from non-Hispanic white male-owned firms is statistically significant at the 95% confidence level.

Source:

BBC Research & Consulting from 1998 and 2003 Survey of Small Business Finances.



Previous national studies have found that African American-owned firms received substantially lower loan amounts than their non-Hispanic white counterparts with similar characteristics. Examination of construction companies in the United States revealed that African American-owned firms received smaller loans than firms with otherwise identical traits.[74]

[74] Grown. 1991. "Commercial Bank Lending Practices and the Development of Black-Owned Construction Companies."

Interest rates. Based on 1998 and 2003 SSBF data, Figure G-16 presents the average interest rates on commercial loans by the race and ethnicity of firm ownership. In 1998, on average, minority- and women-owned firms in the South Atlantic region received loans with similar interest rates compared to loans received by non-Hispanic white male-owned firms. However, in 2003, the average interest rate on loans obtained by minority- and women-owned firms was about 1.9 percentage points higher than the mean interest rate for non-Hispanic white-owned firms.

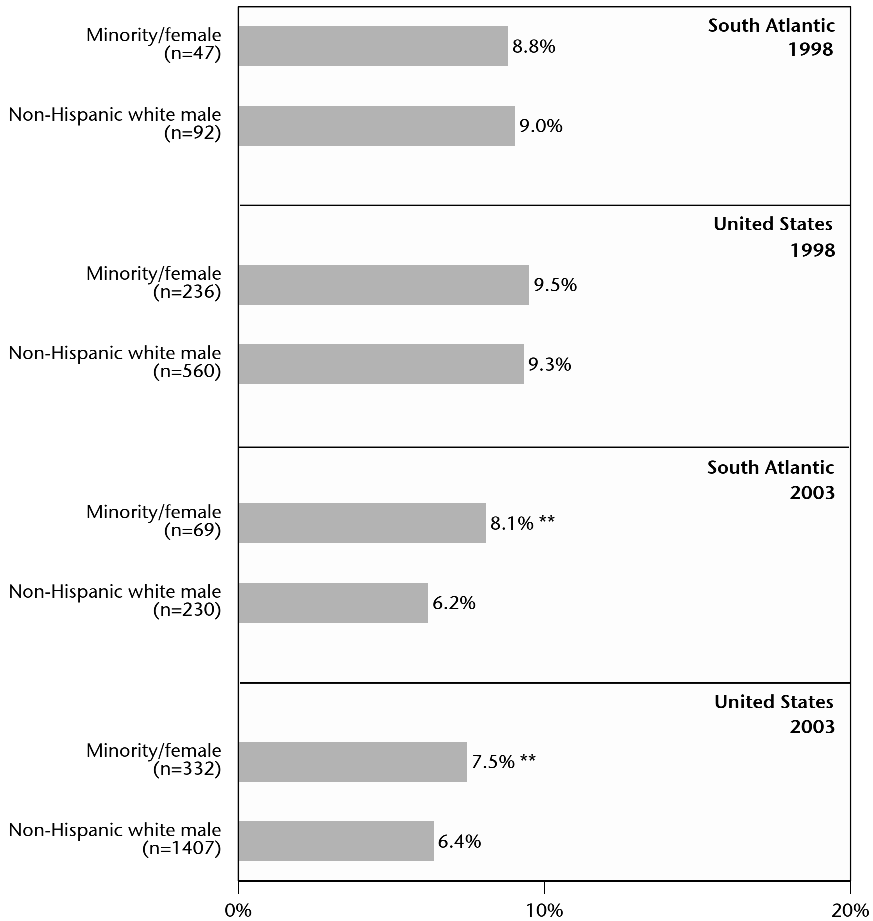
Figure G-16.
Mean interest rate for business loans, 1998 and 2003

Note:

** Denotes that the difference in means from non-Hispanic white male-owned firms is statistically significant at the 95% confidence level.

Source:

BBC Research & Consulting from 1998 and 2003 Survey of Small Business Finances.



Previous studies have investigated differences in interest rates across race/ethnicity and gender while controlling for factors such as individual credit history, firm credit history and Dun and Bradstreet credit scores. Findings from these studies include:

- Hispanic-owned firms had significantly higher interest rates for lines of credit in places with less credit market competition. However, no evidence was found that African American- or female-owned firms received different rates.[75]

- Among a sample of firms with no past credit problems, African American-owned firms paid significantly higher interest rates on approved loans.[76]

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[75] Cavalluzzo. 2002. "Competition, Small Business Financing and Discrimination: Evidence from a New Survey."

[76] Blanchflower. 2003. "Discrimination in the Small Business Credit Market."

NERA's 2009 Augusta study also investigated differences in interest rates by race/ethnicity and gender using an econometric model that controlled for other factors that may impact interest rates. A summary of the results are shown in Figure G-17. NERA developed models for 1998 and 2003 that included the whole of the U.S. as well as interaction terms for the South Atlantic region.

Figure G-17.
Differences in interest rates: Findings from 2009 NERA Augusta-Richmond County study

Note:

N/A: not applicable.

The model specifications included controls for owner characteristics, business characteristics, geographic characteristics, business performance, personal financial history, business financial history and use of financial services.

Source:

NERA Economic Consulting, 2009. "Race, Sex and Business Enterprise: Evidence from Augusta, Georgia."

	Statistical significance	Comparison of interest rates
1998 SSBF		
African American	Yes	Higher
Asian American	No	N/A
Hispanic American	No	N/A
Female	No	N/A
2003 SSBF		
African American	No	N/A
Asian American	No	N/A
Hispanic American	No	N/A
Native/Other	No	N/A
Female	Yes	Higher

NERA's 1998 model found that African American-owned firms in the U.S. pay significantly higher interest rates on business loans, even after controlling for other factors, and that there was no statistically significant difference for African American-owned business in the South Atlantic region. NERA's 2003 model found that Hispanic American-owned businesses were charged significantly higher interest rates on loans compared to non-Hispanic whites at the national level.

The CRA study also investigated differences in interest rates by race/ethnicity and gender using a linear econometric model and controlling for other factors that may impact interest rates.

On a national level, African American- and Hispanic American-owned firms paid a higher interest rate than non-minority-owned firms even after controlling for other factors.[77] Results are summarized in Figure G-18.

[77] CRA International. 2007. "Measuring Minority- and Woman-Owned Construction and Professional Service Firm Availability and Utilization." *Prepared for Santa Clara Valley Transportation Authority.*

Figure G-18.
Differences in interest rates:
Findings from 2007 CRA study using 1998 and 2003 SSBF data

Note:

N/A: not applicable.

The model specification included controls for owner characteristics, business characteristics, geographic characteristics, business performance, personal financial history, business financial history and use of financial services.

Source:

CRA International. 2007. "Measuring Minority- and Woman-Owned Construction and Professional Service Firm Availability and Utilization." Prepared for Santa Clara Valley Transportation Authority.

	Statistical significance	Comparison of interest rates
African American	Yes	Higher
Asian American	No	N/A
Hispanic American	Yes	Higher
Female	No	N/A

Results from BBC availability interviews. At the close of the 2011 availability interviews conducted as part of the GDOT disparity study, BBC asked, "Finally, we're interested in whether your company has experienced barriers or difficulties associated with starting or expanding a business in your industry or with obtaining work. Think about your experiences within the past five years as we ask you these questions."

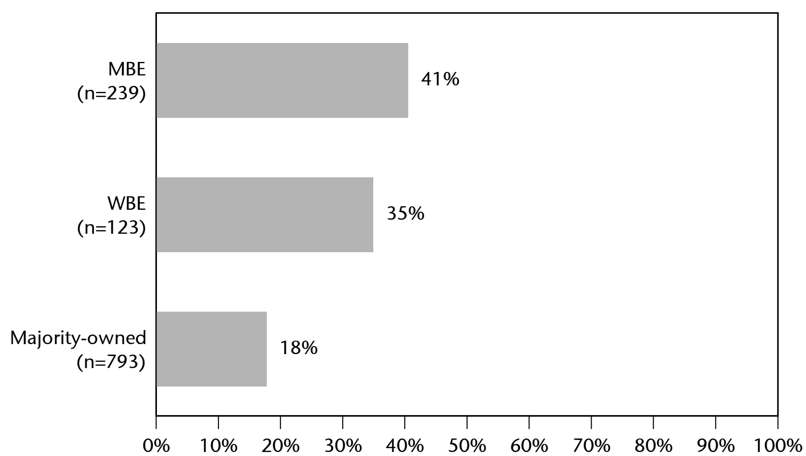
The first question was, "Has your company experienced any difficulties in obtaining lines of credit or loans?"

Access to lines of credit and loans. As shown in Figure G-19, 41 percent of MBEs and 35 percent of WBEs reported difficulties obtaining lines of credit or loans. Fewer majority-owned firms (18%) reported that they had experienced difficulties obtaining lines of credit or loans.

Figure G-19.
Has your company experienced any difficulties in obtaining lines of credit or loans?

Source:

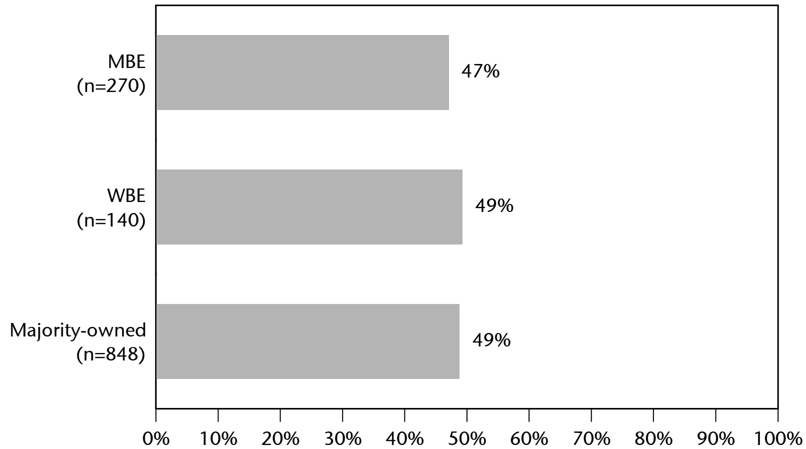
BBC Research & Consulting from 2011 Availability Interviews.



Receiving timely payment. Need for business credit is, in part, linked to whether firms are paid for their work in a timely manner. In the availability interviews, BBC asked, "Has your company had any difficulties receiving payment in a timely manner?" Figure G-20 shows that nearly half of all respondents indicated that they had experienced difficulties receiving payments in a timely manner. There was little difference in responses between MBEs, WBEs and majority-owned firms.

Figure G-20.
Has your company experienced any difficulties receiving payment in a timely manner?

Source:
BBC Research & Consulting from 2011 Availability Interviews.



Other factors affecting capital markets. Ethnic banking sectors may also affect the availability of loans to different minority groups. For example, one study found that strength in the ethnic banking sector influences credit accessibility in ethnic communities in Los Angeles. A strong Asian American bank sector helped Asian American communities transition to successful business environments, and a lack of strong banking sectors in African American communities could hinder development of African American businesses. [78]

Bonding and Insurance

Bonding is closely related to access to capital. Some national studies have identified barriers regarding MBE/WBEs and access to surety bonds for public construction projects.[79] High insurance requirements on public sector projects may also represent a barrier for certain construction and engineering-related firms attempting to do business with government agencies.

Bonding. To research whether bonding represented a barrier for Georgia businesses, BBC asked firms completing availability interviews:

- Has your company obtained or tried to obtain a bond for a project?
- [and if so] Has your company had any difficulties obtaining bonds needed for a project?

Among firms reporting that they had obtained or tried to obtain a bond, one-third of MBEs indicated difficulties obtaining bonds needed for a project. A somewhat smaller share of WBEs (28%) reported difficulties. Only 14 percent of majority-owned firms that had obtained or tried to obtain a bond reported difficulties. Figure G-21 presents these results from the 2011 availability interviews.

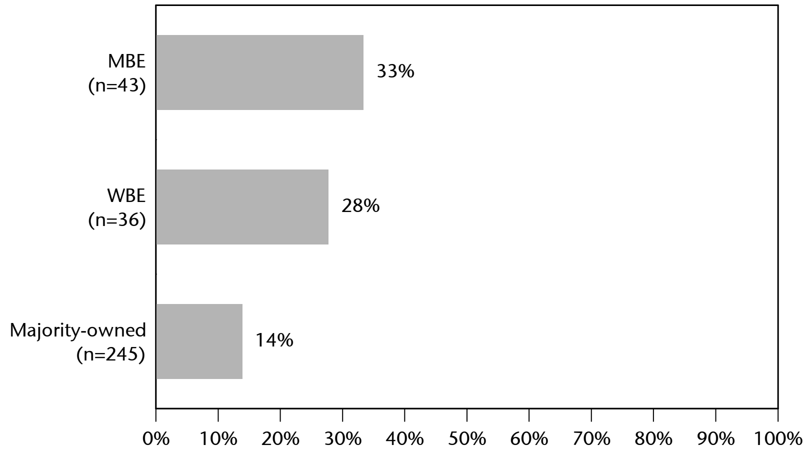
[78] Dymski, Gary and Lisa Mohanty. 1999. "Credit and Banking Structure: Asian and African-American Experience in Los Angeles." *The American Economic Review.* 89:362-366.

[79] For example, Enchautegui, Maria E. et al. 1997. "Do Minority-Owned Businesses Get a Fair Share of Government Contracts?" *The Urban Institute:* 1-117, p. 56.

Figure G-21.
Has your company had any difficulties obtaining bonds needed for a project?

Source:

BBC Research & Consulting from 2011 Availability Interviews.

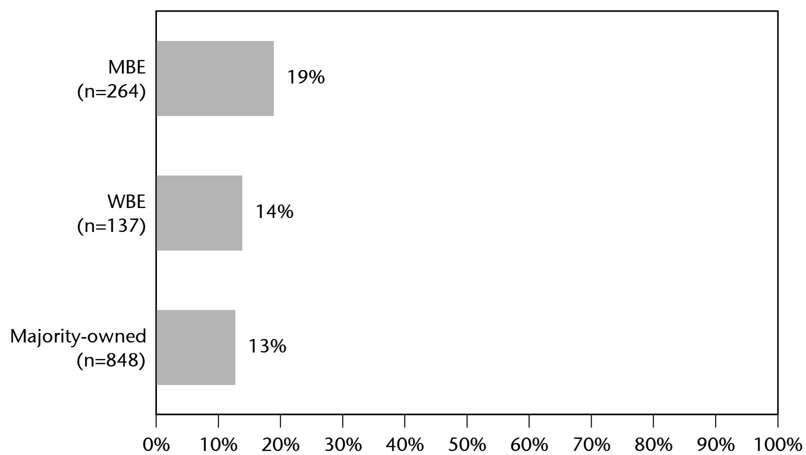


Insurance. BBC also examined whether minority- and women-owned firms were more likely than majority-owned firms within the study area to report that insurance requirements represented a barrier to bidding. About one-in-five MBEs interviewed reported such difficulties. Fewer WBEs (14%) and majority-owned firms (13%) indicated that insurance requirements presented a barrier to bidding on projects.

Figure G-22.
Have any insurance requirements on projects presented a barrier to bidding?

Source:

BBC Research & Consulting from 2011 Availability Interviews.



Summary of Analysis of Access to Capital for Business Formation and Success

There is evidence that minorities and women continue to face certain disadvantages in accessing capital necessary to start and expand businesses, based upon analysis of 2000 and 2007-2009 U.S. Census Bureau data; 2006 and 2009 HMDA data; and the 1998 and 2003 SSBF data.

- Home equity is an important source of funds for business start-up and growth. Relatively fewer African Americans, Asian-Pacific Americans, Subcontinent Asian Americans, Hispanic Americans and Native Americans in Georgia own homes than non-Hispanic whites. African Americans, Hispanic Americans and Native Americans in Georgia who do own homes have lower home values than non-Hispanic whites.

- African Americans, Asian Americans, Hispanic Americans and Native Americans applying for home mortgages in Georgia are more likely than non-minorities to have their applications denied.

- African American and Hispanic American home purchase mortgage borrowers in Georgia have been more likely to have subprime loans.

- Minority- and women-owned firms in the South Atlantic region have been more likely to forgo applying for loans due to fear of denial.

- Based on a regression analysis using 1998 SSBF data, African American, Asian American and Hispanic American business owners were more likely to be denied a loan (results relevant to the South Atlantic region).

- Data indicate that minority- and women-owned firms receiving business loans obtained smaller loans than majority-owned firms. There is some evidence for the South Atlantic region that minority- and women-owned firms receiving business loans pay higher interest rates on those loans.

- Among Georgia firms completing availability interviews as part of this study, minority- and women-owned firms were far more likely to report difficulties obtaining a line of credit or loans than were majority-owned firms.

- Among firms completing availability interviews and reporting that they had obtained or tried to obtain a bond, MBEs and WBEs were far more likely than majority-owned firms to indicate difficulties obtaining a bond. MBEs were also more likely to report difficulties obtaining insurance.